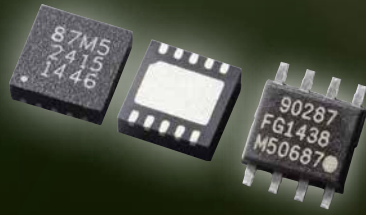


# Melexis

INSPIRED ENGINEERING

MLX90287 & MLX90297

## SINGLE-COIL FAN DRIVERS



The hummingbird's beating wings flap at extremely high frequencies, typically around 50 times per second. This allows it to fly at speeds exceeding 15 m/s, to fly backwards or to seemingly be suspended in the air in perfect balance. What better animal to reflect the motor/control driver and actuator capacitors?

## 12V ROBUST FAN DRIVERS

### MLX90287 & MLX90297

The MLX90287 & MLX90297 are the 2nd GEN of all-in-one single-coil fan drivers with highly sensitive hall sensor using AGC control for optimal low noise/high efficiency commutation control regardless of the magnetic field strength. The PWM input allows controlling the fan speed in combination with a number of resistor-configurable settings to adapt the speed curve to application specific requirements. Targeting low noise fan control in VGA card cooling applications, the GEN II low noise motor control features also have been leveraged in demanding home appliance, white goods, industrial and automotive cooling systems.

### KEY FEATURES

- ✓ Certification
  - AECQ-100
- ✓ Low BOM cost
  - Minimum discrete components
  - Single layer pcb, even half size possible
- ✓ VGA speed curves



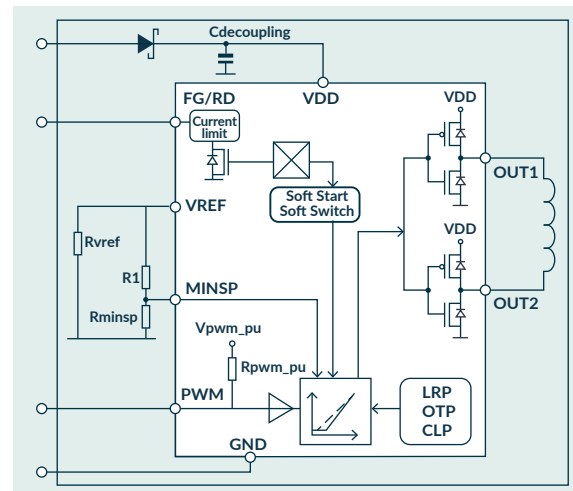
### QUICK REFERENCE

Quick Reference	MLX90287	MLX90297
Minimum speed	Configurable*	Configurable*
Speed curve	Fixed	Configurable* 10%/20%/30%
Average Fan current	< 450 mA	< 600 mA
Motor Power	5 W	7 W
Current limiting	No	Yes
Soft start	Yes	Yes
Soft switching	Yes	Yes
Reverse polarity	Built-in	External diode
Supply voltage range	[4.5V, 18V]	[3.3V, 18V]
ESD—HBM**	7 kV	9 kV

\* Configurable by external resistor (Rvref, Rminsp, R1).

\*\* Human Body Model according AEC-Q100-002 standard.

### MLX90297 SCHEMATIC



FOR MORE INFORMATION: [WWW.MELEXIS.COM/MLX90287](http://WWW.MELEXIS.COM/MLX90287)  
[WWW.MELEXIS.COM/MLX90297](http://WWW.MELEXIS.COM/MLX90297)

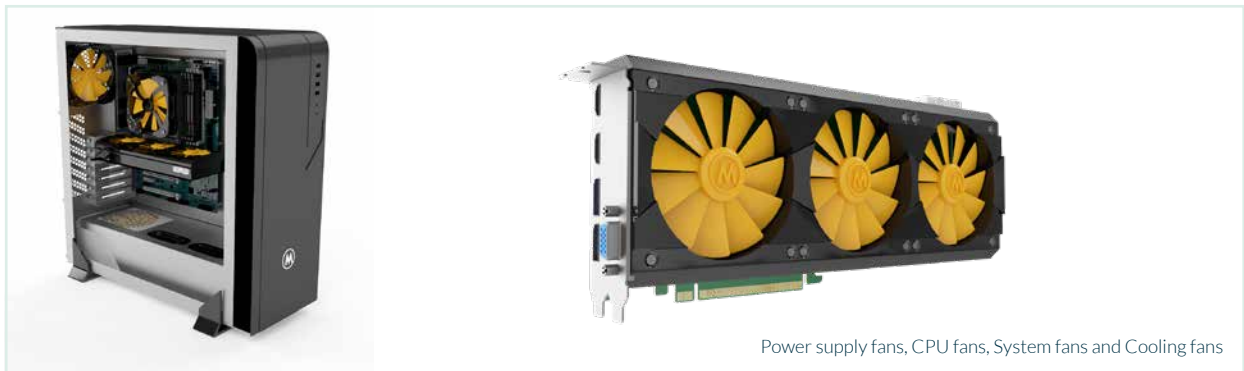
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## ORDERING INFORMATION

Order code*	Grade	Package	FG/RD	Current limit
MLX90287KZC-AAA-000	Industrial/Consumer	ZC: Straight leads SOIC8	FG	N/A
MLX90297KZC-AAF-108	Industrial/Consumer	ZC: Straight leads SOIC8	FG	800 mA
MLX90297KZC-ABF-108	Industrial/Consumer	ZC: Straight leads SOIC8	RD	800 mA
MLX90297KLW-AAF-109	Industrial/Consumer	LW: DFN10 3x3x1	FG	960 mA
MLX90297LLW-AAF-108	Automotive	LW: DFN10 3x3x1	FG	800 mA
MLX90297LLW-AAF-206	Automotive	LW: DFN10 3x3x1	FG	660 mA
MLX90297LLW-ABF-206	Automotive	LW: DFN10 3x3x1	RD	660 mA

\* More ordering codes are available, please contact your sales representative for more information.

## APPLICATION VISUALS



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